

REMARKS

Applicant hereby requests that the Office reconsider the present Application under 37 C.F.R. § 1.116. This Response amends claims 1, 4 and 10 without prejudice or disclaimer, and adds new claims 11-20. After entry of the above claim amendments, claims 1-20 (3 independent and 18 dependent claims) are pending, and no new matter is presented by this Response.

The Final Office Action rejected each of our prior claims, citing a Section 103 combination of US Patents 5,252,951 ("Tannenbaum"), 4,914,624 ("Dunthorn") and 5,256,975 ("Mellitz"). Applicant traverses each of the rejections contained in the Final Office Action for several reasons. Most importantly, even a combination of the three cited references would fail to anticipate the presently-claimed inventions. In particular, no single reference (nor any combination of references) would anticipate at least the element of *examining said capacitance profiles to determine an occurrence of a single gesture resulting from the simultaneous presence of the at least two user input objects*, as effectively recited in each of the independent claims.

Generally speaking, the claimed inventions relate to devices and techniques for processing user inputs received on a capacitive touch pad. In particular, each of the claims recite that the user indicates a desired gesture (e.g. tapping, scrolling, dragging, etc.) by placing two objects (e.g. fingers) on or near the touch pad. The single gesture is recognized through examination of capacitance profiles developed across a matrix of conductors included within the sensor pad to identify the simultaneous presence of two fingers or other objects.

As a preliminary matter, the Final Office Action cites Tannenbaum as the primary reference, but then expressly states¹ that:

Tannenbaum et al does not teach a method of processing a user input received on a capacitive touch sensor pad including developing capacitance profiles in one of an X direction and a Y direction from the matrix of X and Y conductors, the capacitance profiles identifying a presence of at least two user input objects on the capacitive touch sensor pad; determining an occurrence of a single gesture resulting from the at least two user input objects through an examination of the capacitance profiles, indicating the occurrence of the single gesture resulting from the at least two user input objects.

¹ Beginning at page 2 of the Final Office Action.

The Final Office Action therefore cites the Tannenbaum reference, but then acknowledges that Tannenbaum fails to disclose every single limitation of our claim 1. In our Response to the first Office Action, we further noted that Tannenbaum falls far short of disclosing our invention, and in fact does not even relate to the technical fields of user input devices or capacitive sensors.² The primary reference cited against our claims, then, is not even remotely related to our inventions, a fact seemingly acknowledged by the language of the Final Office Action.

The other references similarly fail to describe the alleged limitations of the present claims. The Mellitz reference, for example, describes a test probe for semiconductor chip interconnection packages. Although the reference does briefly refer to a “capacitance profile” of a semiconductor chip, it is clear that this language simply refers to a capacitance sensed as the probe moves across the pins of the chip that can be used to identify broken wiring connections. Such a “capacitance profile” is utterly unrelated to identifying user inputs of any sort, much less identifying multiple simultaneous user inputs present on a touch pad sensor. As a result, the cited reference clearly does not disclose the “*capacitive profiles identifying a simultaneous presence of at least two user input objects on said capacitive touch sensor pad*” recited in our claims.

The final reference cited, Dunthorn, similarly fails to describe the claimed inventions. Dunthorn describes a hierarchical button system for a touchscreen computer wherein an initial press of a touchscreen button brings up subsequent buttons that can be activated. The reference does not, however, describe sensing user inputs using capacitance profiles in any manner whatsoever, nor does the reference expressly or impliedly describe sensing the simultaneous presence of at least two user input objects using capacitance profiles.

As a result, none of the references taken alone or in combination are able disclose at least the element of “*examining said capacitance profiles to determine an occurrence of a single gesture resulting from the simultaneous presence of the at least two user input objects*”, as effectively recited in each of our independent claims. Because no single reference discloses these limitations, even a combination of the three references would fall short of our claimed inventions.

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We further dispute that a person skilled in the art would have any suggestion or motivation to combine the three particular references cited in the Final Office Action, particularly given the diverse technological fields from which the cited references have been drawn. At the very least, the reasons provided for making the claimed combinations fall far short of the requirements imposed by MPEP. MPEP § 2143.01 sets forth several bases for suggesting a particular combination of references. These reasons include the nature of the problem to be solved, the particular teachings of the prior art, and the knowledge of one of ordinary skill in the art. The particular reasons cited by the Office Action, however, simply restate the alleged benefits provided by our invention, and in any event fail to apply the proper standard set forth in the MPEP. That is, even if the Office Action's statements about the benefits provided by the combination are true, these statements are largely irrelevant, since "anticipated benefits" is not a basis for the motivation to combine references that is permitted by MPEP 2143.01.

In view of the above remarks, each of the pending claims are believed to be allowable over the prior art of record. Applicant therefore respectfully requests reconsideration of the rejections and allowance of all pending claims. Should the Examiner have any questions or wish to further discuss this application, Applicant's counsel may be reached at (480) 385-5060 or bcarlson@ifllaw.com.

Although no additional fees or extensions of time are believed to be required for entry of this Response, the Commissioner is authorized and requested to provide any extension and/or to debit any fees that may be required to avoid abandonment of this Application from Deposit Account No. 50-2091.

Respectfully submitted on behalf of
SYNAPTICS INCORPORATED, ASSIGNEE

Dated: 12/7/2005

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² See our Response filed June 22, 2005 at page 4, lines 9-15.